Falls Among Older Adults, Montana
Fall, 2011

Falls are the leading cause of injury-related death among people 65 and older

An estimated 33% of US adults over the age of 65 fall each year.[1] These falls result in mild to severe injuries that require significant recuperation, medical attention, and sometimes hospitalization and even death. After suffering a fall, older adults may find it difficult to live independently or lose confidence to do the activities that they used to do.

- The rate of fall-related death in older adults in the US has been slowly increasing since 1999 . The rate in Montana was significantly higher than in the US in several previous years, but was similar in 2006 and 2007 (most recent year of data available) (Figure 1).
- One third of deaths and 41% of hospitalizations due to falls among older adults are due to slipping, tripping, stumbling, or some other fall on a level surface (Table 1).
- A high percent of Montana fatal falls (35%) and hospitalizations (42%) due to a fall do not list a cause indicating that more complete documentation is needed (Table 1).
- 1,770 hospitalizations for unintentional fall injuries occurred in Montana in 2010 (data not shown)

In 2010, hospitalizations for falls among people ages 65 and older cost $41.7 million in Montana and 82% were paid by Medicare

Figure 1. Age-adjusted rate of fall-related death among people aged 65 and older, Montana and US, 1999-2007

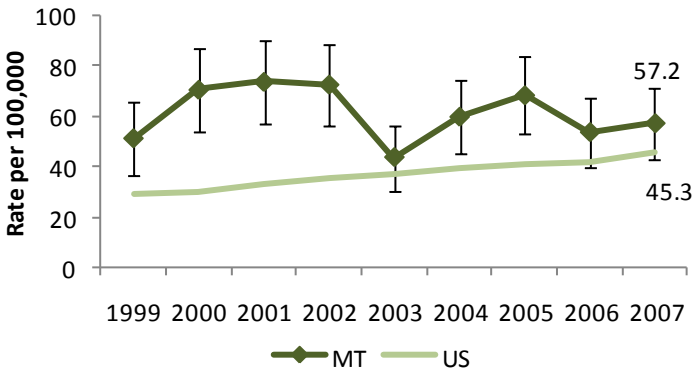
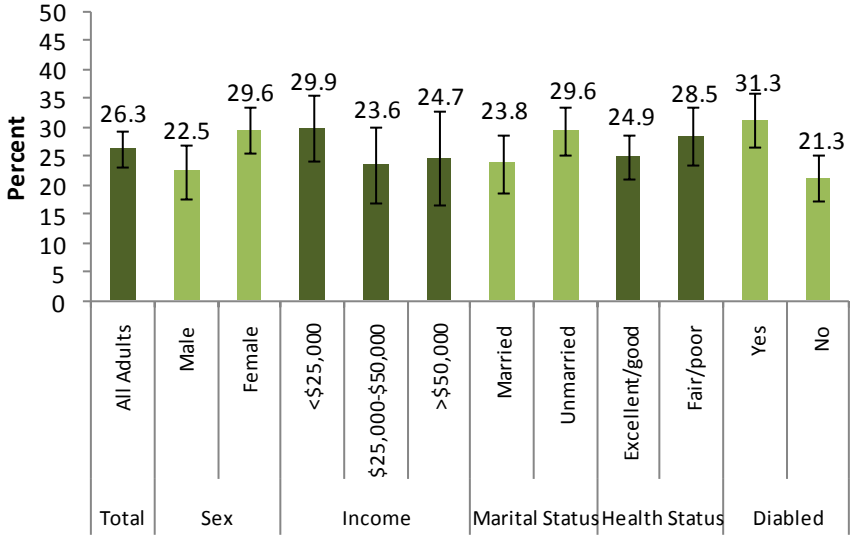


Table 1. Percent of deaths and hospitalizations by cause of fall, Montana

	Deaths (2000-2009)	Hospitalizations (2010)
Unspecified fall	41.8	35.0
Slipping, tripping and stumbling or other fall on same level	33.3	41.4
Bed	8.4	3.4
Fall on and from stairs and steps	7.6	6.7
Other specific cause	3.6	9.2
Wheelchair	2.6	1.0
From chair	2.0	1.8
Ladder	0.8	1.6

Figure 2. Percent of people aged 65 older who fell and were injured in the last 3 months by selected characteristics, BRFSS, 2006, 2008, 2010



I = 95% Confidence Interval

Self-Reported Falls that Cause an Injury

Not all falls result in a death or hospitalization. Some may not result in a trip to the doctor's office, even though they do result in an injury that may lead a person to start restricting activities or lose confidence in their abilities. We used data from the Behavioral Risk Factor Surveillance System (BRFSS) survey to identify characteristics of older adults who self-reported falling and being injured in the last three months. It is estimated that 26% of adults aged 65 and older fell in the last three months and were injured (Figure 2). There were no significant differences by sex, income, marital status, and health status in the frequency of falling and being injured. However, adults 65 and older who reported being disabled had a significantly higher frequency of falling and being injured than did those who were not disabled (Figure 2).

Fall Prevention Program for Older Adults

Falls are preventable. Addressing the common risk factors for falls, which include age, vision changes, multiple medications, lack of regular exercise, and home hazards can significantly reduce the risk for falls. The Montana Injury Prevention Program has implemented Stepping On[3], an evidence-based program for adults aged 65 and older who have recently fallen or have a fear of falling. The course teaches specific exercises for increasing strength and balance, discusses the role of vitamin D, vision health, medication interaction, and home hazard removal in fall prevention. In Montana, three sites are piloting the Stepping On program with success. The majority of participants in these sites are white women. Over a third of participants are married or partnered and most have a high school diploma. One quarter use a walking aid. Chronic conditions like arthritis, diabetes, and heart disease are very common among participants (Table 2). Data were collected from participants at the beginning of the class and throughout the class, up to 6 months from the beginning of the course. Among participants that completed the 6 months of follow-up, there was a 15% decrease in participants reporting they fell one or more times in the preceding 6 months and a 77% decrease in the percent of falls that led to a doctor's visit. Participants reported less fear of falling and fewer participants restricted their activities due to fear of falling (Table 3). However, measurements using two scales, the Fall Behavior Scale and the Fall Efficacy scale, did not change over time indicating that there was little long-term behavior change after the class ended (data not shown). Sites are now tailoring their education to emphasize long-term fall prevention efforts with the goal of improving these measures.

Table 2. Characteristics of Stepping On participants -Great Falls, Lewistown, Missoula, Montana, 2010

Characteristic	Percent (N=111)
Female	81
White	98
Married or partnered	36
High school diploma or higher	92
Have someone who can help around the home	80
Use a walking aid	25
Have arthritis	57
Have diabetes	23
Have heart disease	30
Have depression	13
Have a lung disease	18

Table 3. Results of Stepping On program-Great Falls, Lewistown, Missoula, Montana, 2010 (N=40)

	Baseline (%)	3 month (%)	6 month (%)	Percent Change (baseline to 6 months)
Fell in the last 6 months	55	N/A	47	-15
Saw a doctor for a fall in the last 6 months	26	N/A	6	-77
'Often' or 'Very Often' fear falling	38	23	20	-39
Restrict activities due to fear of falling	40	28	30	-25

Conclusions and Recommendations

A fall for an older adult can be detrimental to their continued health and independence. Falls are the leading cause of injury death for older adults. More than a quarter of older adults in Montana reported having fallen and been injured in the last three months. There are services available in Montana for older adults who would like to learn how to prevent falls through the Stepping On programs around the state.

For more information about Stepping On or fall prevention in Montana see our website at www.dphhs.mt.gov/ems/prevention/prevention_menu.html or contact the Montana Injury Prevention program at: bperkins@mt.gov, 406-444-4126.

Methods and Limitations

This report includes hospitalization and death records where the cause of listed was injury-related. Injuries were classified using the Center for Disease Control and Prevention's 'Injury Morbidity and Mortality Matrix'.[2] Data selected here are dependent on information available at the time coding the inpatient visit or the death certificate.

For information on the methods and limitations of the Behavioral Risk Factor Surveillance System survey (BRFSS) see: http://www.cdc.gov/brfss/

References:

1. Centers for Disease Control and Prevention. Traumatic brain injuries can result from senior falls. Accessed at: http://www.cdc.gov/TraumaticBrainInjury/tbi_falls_results.html.
2. Centers for Disease Control and Prevention. Recommended framework for presenting injury mortality data. MMWR 1997;46(RR-14) Available from: http://www.cdc.gov/mmwr/preview/mmwrhtml/00049162.htm.
3. Clemson, L., Cumming, R.G., Kendig, *et al.* The effectiveness of a community-based program for reducing the incidence of falls in the elderly: a randomized trial. 2004. *J Am Geriatrics Soc.* 52:1487-94.

Montana Injury Prevention

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